

Abstract

A wafer support position control mechanism selectively positions a semiconductor wafer along an axis of excursion within a process chamber. An elevator tube protrudes through an orifice in the chamber surface and is connected at a first distal end to the wafer support. A compliant, dynamic seal within the orifice engages the elevator tube to form a gas curtain within a gap between the seal and the elevator tube to seal the process chamber. A moveable carriage is connected to the elevator tube at a second distal end for moving the wafer support along the axis of excursion. Rigid mechanical structure couples the second distal end of the elevator tube to the moveable carriage.